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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/711,820      | 10/07/2004  | Robert P. Rouen      | 68.0496             | 5819             |

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SCHLUMBERGER RESERVOIR COMPLETIONS  
14910 AIRLINE ROAD  
ROSHARON, TX 77583

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| EXAMINER |
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ANDREWS, DAVID L

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

3672

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|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

12/07/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

vsolis2@slb.com

|                              |                               |                                  |  |
|------------------------------|-------------------------------|----------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/711,820 | Applicant(s)<br>ROUEN, ROBERT P. |  |
|                              | Examiner<br>David Andrews     | Art Unit<br>3672                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-20 and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/7/2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The amendment filed 9/27/2007 has been entered.

#### ***Response to Arguments***

Applicant's arguments filed 9/27/2007 have been fully considered but they are not persuasive. Applicant argues that a skilled person would not have been motivated to add the valves of Prior to the device of McCulloch since McCulloch already has means to control flow through the conduit. However, as pointed out in the Office action of 8/10/2007, the valves of Prior on the device of McCulloch would give individual control to the orifices, which one of ordinary skill in the art would recognize as advantageous for at least the reasons outlined in Prior, that is the ability to control the amount of lifting gas necessary to give the desired production (col. 1, lines 46+) and the ability to control these from the surface, thus eliminating the need to manually adjust the valves (col. 2, lines 16+).

Applicant additionally argues that McCulloch teaches away from adding valves such as Prior's to the lateral ports since McCulloch states that "The lower end 72 of the member 70 may be opened or closed as may be desired" and one of ordinary skill would recognize that the lateral ports 71 are meant to be free flowing. However it is the examiner's view that, if anything, the passage quoted by applicant illustrates the desire to control not only the lower end orifice but all orifice's since the McCulloch recognizes that different production environments may prompt the user to desire different flow

configurations. The fact that McCulloch does not include valves on the lateral ports is not considered a teaching away since this is indeed the reason for the combination of references to demonstrate the obviousness of the claimed invention. Absent an explicit teaching in McCulloch that precludes valves on the lateral ports, the combination is deemed proper.

Applicant finally argues that if one were to connect Prior's valves with the device of McCulloch that the device of McCulloch would then become burdensome and one of ordinary skill in the art would not foresee any advantage to the combination. The advantage of such a combination is outlined above and in the teachings of Pryor, at least, since individual control over the orifices of McCulloch would certainly provide the advantage of more precise control on the output of the device. Further, the test of obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference, but rather the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art. *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Also see MPEP 2145 (III).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13, 15, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch (US 2,798,558) in view of Pryor (US 2,725,014).

McCulloch discloses a gas injection apparatus comprising: a tubular member (34) defining an axial bore therethrough and adapted to deliver a gas into a wellbore proximate a perforation interval via orifices (71); a sealing mechanism to seal above the perforation interval (19), wherein the tubular member engages the sealing mechanism (figure 1); wherein the sealing mechanism is a dual-port packer (figure 1); wherein the perforation interval is within a gas or oil bearing well (col. 2, lines 14-20); a retrieving element (36); a tubular string to produce fluid from the perforation interval via one port in the sealing mechanism (15). McCulloch does not disclose gas lift valves on the orifices.

Pryor discloses an apparatus for gas lift injection comprising a plurality of gas lift valves (16, 17, 18, 19, or 23, 24, 25, 26) to regulate communication between the axial bore of the tubular member to the wellbore (col. 4, lines 2-7). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the valves of Pryor on the system of McCulloch in order to provide actuation control to regulate the orifices (col. 2, lines 16+).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch in view of Pryor and further in view McCarvell et al. (US 3,192,869). McCulloch discloses a gas lift system comprising: a dual-port packer (19); a tubing string adapted to deliver gas (15); and an injection tool (21) with a plurality of gas injection sites at or below the perforation interval. McCulloch does not disclose valves on the string or the injection tool. Pryor discloses gas lift valves (16, 17, 18, 19, or 23, 24, 25, 26) to deliver gas into a wellbore (col. 4, lines 2-7). McCarvell et al. discloses a valve (V-1) on a production tubing string that is actuated in response to gas pressure in the a well annulus exceeding a predetermined lever (col. 6, lines 1-18). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of McCulloch with the gas lift valves of Pryor and the pressure regulated opening tubing string valve of Peter in order to provide actuation control to regulate the injection of gas through the tool and to maintain pressure within the production string unless gas lift pressure is sufficient to aid the lifting of fluids.

Claims 16, 18-20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch in view of Pryor, as applied to claims 1, 7, and 13 above and further in view McCarvell et al. McCulloch and Pryor disclose all the limitations of these claims, with Pryor additionally disclosing that each valve opened while the others are closed (individual actuation, col. 3, lines 4-22). McCulloch and Pryor do not disclose that the valves to be actuated in response to different gas pressures within the annulus. McCarvell teaches a series of gas lift valves (V-1, V-2, V-3) that are actuated at a first,

second and third pressures (col. 4, lines 1-29) sequentially. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the systems of McCulloch with gas pressure actuation teachings of McCarvell in order to provide automated means of controlling the valves so they only open upon sufficient gas lift pressure available.

### ***Conclusion***

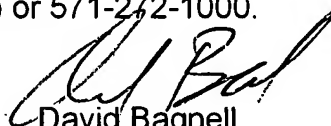
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Andrews whose telephone number is (571) 272-6558. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

DLA  
11/30/07